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10/799,308	03/13/2004	Daniel E. Cooney	11960	7830
26587 7590 07/07/2008 MCNEES WALLACE & NURICK LLC 100 PINE STREET P.O. BOX 1166 HARRISBURG, PA 17108-1166				
EXAMINER				
DAVIS, OCTAVIA L				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/799,308

**Applicant(s)**

COONEY, DANIEL E.

**Examiner**

OCTAVIA DAVIS

**Art Unit**

2855

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6, 8-19, 24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-19, 24 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI-108)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. This application contains claims drawn to an invention nonelected with traverse in the reply filed on 11/16/06. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 6 and 8 – 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Chang (5,605,873).

Regarding claims 1, 6 and 8, Chang discloses a pressure sensitive verification system and use thereof comprising a material 14 having a surface, an indicator coating having an impact-sensitive component that produces a visible change when subjected to a mechanical impact, the indicator coating comprising a mixture of a first reactant and a second reactant separated by a barrier that is rupturable so that the reactants mix and produce the visible change upon the impact and inspecting the material for the presence of the visible change (See Col. 5, lines 35 – 44 and Col. 7, lines 12 – 21).

Regarding claims 9 and 10, a light absorbing compound is incorporated into the rupturable barrier and a chromogenic compound enabling the chromogenic compound to react with the color developer (See Col. 7, lines 22 – 26 and 40 – 46).

Regarding claim 11, in Chang, the material is accurately monitored during a series of tests (See Col. 10, lines 22 - 37).

Regarding claims 12, 13, 18 and 19, a design criteria is established for the material for various configurations (Col. 10, lines 22 – 37).

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 – 5, 14 – 19, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Change (873") in view of Szweda et al (5,488,017) and Carper et al (7,090,894).

Regarding claims 2 – 5, 14, 24 and 25, Chang discloses all of the limitations of these claims except for a teaching that the material has a tensile elongation to failure of less than about 2 percent and the composite material is prepared for an aircraft. However, Szweda et al disclose a fiber reinforced ceramic matrix composite member comprising a reinforced ceramic matrix composite member represented by curve 2 having a percent elongation of failure in excess of about 0.4% (See Col. 8, lines 21 – 23). Carper et al disclose a bond coat for the application of the's and wear coatings

to an oxide ceramic matrix comprising ceramic composites for use in aircraft gas turbine engines (See Col. 1, lines 11 – 23).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chang according to the teachings of Szwedra et al and Carper et al for the purposes of, producing ceramic composite articles including a method of controlling the porosity in the matrix of a ceramic matrix composite material to curb undesirable porosity (See Szwedra et al, Col. 3, lines 24 – 28) and advantageously providing a composition that is inexpensive to make, easy to form and apply in a consistent manner and that tightly adheres to both the substrate and the coating for providing enhanced durability improvement (See Carper et al, Col. 2, lines 1 - 5).

Regarding claims 15 and 16, in Chang, a light absorbing compound is incorporated into the rupturable barrier and a chromogenic compound enabling the chromogenic compound to react with the color developer (See Col. 7, lines 22 – 26 and 40 – 46).

Regarding claim 17, in Chang, the material is accurately monitored during a series of tests (See Col. 10, lines 22 - 37).

Regarding claims 18 and 19, in Chang, a design criteria is established for the material for various configurations (Col. 10, lines 22 – 37).

### ***Response to Arguments***

6. Applicant's arguments filed 3/27/08 have been fully considered but they are not persuasive. In response to applicant's argument that the references do not disclose an impact, it is the examiner's position that Merriam Webster's Collegiate Dictionary, Tenth Edition, defines *impact* as to strike forcefully, to impinge or make contact with a force, a forceful collision or contact, the force

of impression of one thing on another, to press together and *strike* as to bring into forceful contact or to come into contact or collision with. In Chang, a pressure sensitive system is activated on due to a striking or impacting force in that the coating material is activated by quickly rubbing a blunt implement (force applying mean) across the material 14 to generate sufficient pressure to produce a colored image (See Col. 7, lines 12 – 15), the force applying means including a mechanical force applying means including a human fingernail, a pen, a stylus, a coin and the like and the force applying means being used to rub or strike or scratch or impact a line across the surface of the coating to generate pressure in the coating (See Col. 9, lines 41 - 45, Col. 10, lines 50 - 54 and 63 - 67). With respect to applicant's argument that the composite material is for an aircraft, it is the examiner's position that applicant is arguing new issues, thus the reference still stands.

Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Octavia Davis whose telephone number is 571-272-2176. The examiner can normally be reached on Mon through Thurs from 9 to 5. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Edward Lefkowitz/

Supervisory Patent Examiner, Art Unit 2855

OD/2855

7/1/08

***Response to Arguments***

9. Applicant's arguments filed 11/16/06 have been fully considered but they are not persuasive. In response to applicant's arguments that the references do not disclose *"an indicator paint comprising a mixture of a first reactant and a second reactant separated by a barrier that is rupturable so that the first reactant and the second reactant mix and produce the visible change when the indicator paint is subjected to the impact, applying the paint to the surface of the material, placing the material having the indicator paint thereon into circumstances where it may be subject to the mechanical impact, preparing the indicator paint having the impact sensitive component that changes color when subjected to the mechanical impact, preparing the indicator paint that does not emit light when subjected to the mechanical impact, not instrumenting the material having the paint thereon with light detection instrumentation and determining a first design limit and a second design limit for the composite material in the event that it has the indicator paint applied thereto and in the event that it has no indicator paint applied*



*thereto*", it is the examiner's position that Vincent et al disclose providing a material having a surface (See Col. 4, lines 37 – 41), providing, preparing, making the material from the indicator paint (coat) that has an impact sensitive component (the barrier) that produces a visible change when subjected to a mechanical impact (See Col. 6, lines 18 – 28 and 67 – 68, Col. 7, lines 1 – 2, 29 – 31 and 53 – 55 and Col. 8, lines 25 – 29), the indicator paint comprising a mixture of a first reactant and a second reactant (See Col. 4, lines 38 – 42 and 46 – 48 and Col. 8, lines 52 – 54, See claim 1 of Vincent et al, lines 52 - 54) separated by a barrier that is rupturable (See Col. 2, lines 3 – 10, Col. 4, lines 47 – 49, Col. 6, lines 18 – 28 and 66 – 67 and Col. 7, lines 1 - 2) so that the first reactant and the second reactant mix and produce the visible change when the indicator paint is subjected to the impact (See Col. 2, lines 3 – 14, see claim 1 of Vincent et al, lines 52 - 54), the coat is applied to the surface of the material (paper, substrate) (See Col. 4, lines 39 – 43 and 46 – 49 and Col. 5, lines 56 – 59), the material being placed into circumstances where it is subjected to the mechanical impact by means of the stylus or the like (See Col. 2, lines 3 – 10 and Col. 6, lines 18 – 24, See Examples 1 – Example 7 in Cols. 6 - 8), the material or sheet being inspected for the presence of visible change (See Col. 6, lines 66 – 67, Col. 7, lines 1 – 2, Col. 7, lines 29 – 31 and 52 – 54, Col. 8, lines 4 – 7 and 25 – 29, see claim 1 of Vincent et al) and in Yamamura et al, the material is produced or designed by a number of methods (See Col. 5, lines 59 – 61 and 63 – 68 and Col. 6, lines 1 – 17), the mechanical strength of the material is increased (See Col. 6, lines 33 – 37) to produce a design criteria for the material, and design standards of the material are produced including its bending strength, critical stress intensity factor and degradation (See Col. 6, lines 52 – 64). With respect to “*preparing the indicator paint that does not emit light when subjected to the mechanical impact, not instrumenting the material having the paint thereon with light detection instrumentation*”, “The selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. *In re Leshin*, 227 F.2d 197, 125

USPQ 416 (CCPA 1960) and in *Vincent et al*, the coating is a light absorbing material that includes a dye the does not emit light, thus the references still stand.

### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Octavia Davis whose telephone number is 571-272-2176. The examiner can normally be reached on Mon through Thurs from 9 to 5. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

Art Unit: 2855

applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

OD/2855

1/31/07

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1 – 19 and 24, drawn to a method of indicating the presence of mechanical impact on a material, classified in class 73, subclass 12.01.

- II. Claim 20, drawn to an article, classified in class 73, subclass 864.72.
- III. Claims 21 - 23, drawn to a method of establishing a design standard for a low ductility material, classified in class 73, subclass 768.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions I - III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, Invention II has separate utility from Invention I such as a plurality of microcapsules. Invention III has separate utility from Invention I such as tensile elongation to failure. Invention III has separate utility from Invention II such as a matrix comprising a paint binder.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II and Group III restriction for examination purposes as indicated is proper.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

6. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

7. Applicant is reminded that upon the cancellation of claims to non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently

named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Octavia Davis whose telephone number is 571-272-2176. The examiner can normally be reached on Mon through Thurs from 9 to 5. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

OD/2855

10/11/06



***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 6 and 8 – 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Vincent et al (3,906,123).

Regarding claims 1 and 6, Vincent et al disclose a self-contained pressure sensitive record system comprising a material (paper) having a surface, an indicator coating having an impact-sensitive component that produces a visible change when subjected to a mechanical impact, applying

the coat to the surface of the material (See Col. 4, lines 1 –13) and subjecting the material to a load and inspecting the material having the indicator paint thereon for the presence of the visible change (See Col. 6, lines 18 – 28).

Regarding claim 8, the first reactant and the second reactant react together to produce the visible change upon the impact (See Col. 4, lines 25 – 42).

Regarding claims 9 and 10, the coating is a light absorbing material that includes a dye (See Col. 4, lines 6 – 13 and 33 – 36).

Regarding claim 11, the material is accurately monitored during a series of tests (See Col. 6, lines 34 – 66 and Col. 7, lines 1 – 54).

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Patel (5,254,473).

Regarding claim 20, Patel discloses a solid state device for monitoring integral values of time and temperature of storage of perishables comprising a substrate 3 having a surface, a coat applied to the surface that includes microcapsules having reactants 6, 7 and a matrix and binding agent 6 wherein the microcapsules are mixed with and embedded in the matrix (See Col. 8, lines 21 – 25) and the reactants produce a color change in the coat when mixed (See Col. 7, lines 19 – 46, 67 and 68 and Col. 8, lines 1 – 35).



***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 21 – 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamura et al (4,618,529).

Regarding claim 21, Yamamura et al disclose a fiber reinforced ceramic composite material comprising means for setting a first design standard for a ceramic material having an indicator coating applied thereto (See Col. 4, lines 58 – 68, Col. 5, lines 21 – 40 and Col. 6, lines 52 – 53), wherein the indicator coating has an impact-sensitive component that produces a visible change when subjected to a mechanical impact and setting a second design standard for the ceramic material which does not have the indicator paint applied thereto (See Col. 6, lines 52 – 64).

Regarding claims 22 and 23, setting the first design standard with a unity damage-tolerance factor K<sub>IC</sub> and wherein the step of setting the second design standard includes the step of setting the second design standard with a damage-tolerance factor greater than unity and greater than the first damage tolerance factor (See Col. 6, lines 51 – 68 and Col. 7, lines 1 – 36).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2855

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2 – 5, 14 – 17 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vincent et al in view of Szweda et al (5,488,017).

Regarding claims 2 – 5, 14 and 24, Vincent et al disclose all of the limitations of these claims except for a teaching that the material has a tensile elongation to failure of less than about 2 percent. However, Szweda et al disclose a fiber reinforced ceramic matrix composite member comprising a reinforced ceramic matrix composite member represented by curve 2 having a percent elongation of failure in excess of about 0.4% (See Col. 8, lines 21 – 23).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vincent et al according to the teachings of Szweda et al for the purpose of, producing ceramic composite articles including a method of controlling the porosity in the matrix of a ceramic matrix composite material to curb undesirable porosity (See Szweda et al, Col. 3, lines 24 – 28).

Regarding claims 15 and 16, in Vincent et al, the coating is a light absorbing material that includes a dye (See Col. 4, lines 6 – 13 and 33 – 36).

Regarding claim 17, in Vincent et al, the material is accurately monitored during a series of tests (See Col. 6, lines 34 – 66 and Col. 7, lines 1 – 54).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 12, 13, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vincent et al and Szweda et al, as applied to claims 1 – 11 and 14 – 17 above, and further in view of Yamamura et al (4,618,529).

Regarding claims 12, 13, 18 and 19, Vincent et al and Szweda et al disclose all of the limitations of these claims except for teachings that design limits are determined for the composite, low ductility, polymer-matrix and ceramic material when the material has or does not have the paint applied thereto and the material having a tensile elongation to failure factor of less than about 2 percent. However, Yamamura et al disclose a fiber-reinforced ceramic composite material comprising steps for determining a design criteria for the ceramic composite material including analyzing various properties of the material to achieve a desired composite material (See Col. 6, lines 52 – 64 and Cols. 11 and 12, Table 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vincent et al and Szweda et al according to the teachings of Yamamura et al for the purpose of, providing a ceramic composite material with a critical stress factor to achieve a great improvement in the inherent brittleness and non-uniformity in the mechanical strength of ceramics and a composite material that is suitable for used as a structure material (See Yamamura et al, Col. 7, lines 26 – 36).

### ***Response to Arguments***

11. Applicant's arguments with respect to these claims have been considered but are moot in view of the new grounds of rejection.

Applicant's arguments filed 1/13/06 have been fully considered but they are not persuasive. In response to applicant's arguments that the references do not disclose "*an indicator paint that is a mixture of a first reactant and a second reactant*" and a "*first design standard or a second design standard*", it is the examiner's position that in Vincent et al the three layered pressure sensitive system, including a substrate such as paper (See Col. 4, lines 39 – 42), undergoes a localized pressure wherein particles of a reactant are pushed through a rupturable pressure sensitive barrier coating and capsule walls to release an oily solution or droplets for reaction with acidic clay particles resulting in a distinctive color image (See Col. 6, lines 19 – 28 and 49 – 68 and Col 7, lines 24 – 32) and in Yamamura et al, during the production of the composite material, the fibers have a specific critical stress intensity factor K<sub>1C</sub> that is measured and the bending strength ratio is determined (See Col. 6, lines 52 – 61 and Col. 7, lines 25 – 36) to provide a composite material having good uniformity in mechanical strength and excellent reliability and having excellent thermal shock resistance (See Col. 2, lines 16-18), thus the references still stand.

### ***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Octavia Davis whose telephone number is 571-272-2176. The examiner can normally be reached on Mon through Thurs from 9 to 5. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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OD/2855

3/28/06